Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

1. (previously presented) A host interface comprising:

a channel select bit encoder that asserts to a media controller one or more channel select bits indicating one of a plurality of virtual channels through which the host interface will communicate over a data bus with the media controller;

a virtual channel controller coupled to the channel select bit encoder that establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller.

2. (previously presented) The host interface of claim 1, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer data between the host interface and the media controller.

3. (previously presented) The host interface of claim 1, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer control signals between the host interface and the media controller.

4. (previously presented) The host interface of claim 1, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer side band information between the host interface and the media controller.

5. (previously presented) The host interface of claim 23, wherein the communication controller transfers data to and from the media controller synchronous with a clock in the host controller.

6. (previously presented) The host interface of claim 23, wherein the communication controller transfers data to and from the media controller based on a quadrature handshake model.

7. (previously presented) A media controller comprising:

a channel select bit decoder that decodes one or more channel select bits received from a host interface indicating one of a plurality of virtual channels through which the host interface will communicate over a data bus with the media controller;

a virtual channel controller coupled to the channel select bit decoder that decodes the one or more channel select bits and establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller selected based on the one or more decoded channel select bits.

8. (previously presented) The media controller of claim 7, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer data between the host interface and the media controller.

9. (previously presented) The media controller of claim 7, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer control signals between the host interface and the media controller.

10. (previously presented) The media controller of claim 7, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer side band information between the host interface and the media controller.

11. (previously presented) The media controller of claim 24, wherein the communication controller transfers data to and from the host interface synchronous with a clock in the host interface.

12. (previously presented) The media controller of claim 24, wherein the communication controller transfers data to and from the host interface based on a quadrature handshake model.

13. (previously presented) The media controller of claim 7, wherein the connection is a peer-to-peer connection and the media controller limits access to a storage medium of a data storage device through the peer-to-peer connection.

14. (previously presented) The media controller of claim 13, wherein the media controller limits access to the storage medium based on one or more registers relating to each of the virtual channels of the media controller, the registers indicating a range of addresses on the storage medium that may be accessed via the related virtual channel of the media controller.

15. (previously presented) A data storage device comprising:

a host interface comprising a channel select bit encoder that asserts one or more channel select bits indicating one of a plurality of virtual channels through which the host interface will communicate over a data bus; and

a media controller comprising a channel select bit decoder that decodes the one or more channel select bits received from the host interface and a virtual channel controller coupled to the channel select bit decoder that establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller selected based on the one or more decoded channel select bits.

16. (previously presented) The data storage device of claim 15, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer data between the host interface and the media controller.

17. (previously presented) The data storage device of claim 15, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer control signals between the host interface and the media controller.

18. (previously presented) The data storage device of claim 15, wherein the connection is a peer-to-peer connection and the indicated virtual channel of the host interface and the corresponding virtual channel of the media controller are used to establish the peer-to-peer connection to transfer side band information between the host interface and the media controller.

19. (previously presented) The data storage device of claim 25, wherein the communication controller of the host interface transfers data to and from the media controller synchronous with a clock in the host controller.

20. (previously presented) The data storage device of claim 25, wherein the communication controller of the host interface transfers data to and from the media controller based on a quadrature handshake model.

21. (previously presented) The data storage device of claim 15, wherein the connection is a peer-to-peer connection and the media controller limits access to a storage medium of the data storage device through the peer-to-peer connection.

22. (previously presented) The data storage device of claim 21, wherein the media controller limits access to the storage medium based on one or more registers relating to each of the virtual channels of the media controller, the registers indicating a range of addresses on the storage medium that may be accessed via the related virtual channel of the media controller.

23. (previously presented) The host interface of claim 1 further comprising:
a communication controller that transfers data between the host interface and the media controller via address-less transfer.

24. (previously presented) The media controller of claim 7 further comprising:
a communication controller that transfers data between the host interface and the media controller via address-less transfer.

25. (previously presented) The data storage device of claim 15 wherein the host interface further comprises:
a communication controller that transfers data between the host interface and the media controller via address-less transfer.